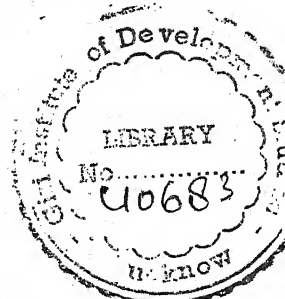# INTER-STATE DISPARITIES IN PER CAPITA SDP: AN EXPLORATORY STUDY

Ajit Kumar Singh*

Introduction

Probably no other aspect of the Indian economy has received as much attention as that of regional disparities both in the academic as well as in the political circles. From the beginning of the planning process it has been a major issue in the Indian political economy. Consequently, development of the backward areas and balanced regional development have been reiterated as among the major objectives of the successive Five Year Plans of the country. A large battery of instruments has been pressed into service, sometimes ignoring the questions of economic efficiency and cost, to achieve these objectives. Nevertheless the problem of regional disparities has continued to stubbornly persist over the decades.

Objectives and Scope

The problem of regional disparities can be discussed at various levels. In the present paper we will confine ourselves to the question of inter-state disparities. We will first examine the trends in the total and per capita state domestic product for major states of the Union and then examine the

trends in regional disparities. Attention will then be focussed on some of the basic factors associated with inter-state disparities. In the end, some of the policy issues touching upon regional disparities will be briefly discussed.

Data Base

The analysis covers the period 1970-71 to 1984-85 and is mainly based upon the series of net state domestic product at constant 1970-71 prices prepared by the State Statistical Bureaus and compiled by CSO in a recent brochure (1).

Growth of Total SDP

As can be seen from Table 1, there are large variations in the rate of growth of total SDP among states - from 1.90 per cent per annum to 5.16 per cent per annum. Punjab, Haryana, Gujarat, Jammu and Kashmir and Maharashtra have been the fastest growing states. On the other hand growth rates were lowest in the states of Tamil Nadu, West Bengal, Kerala and Himachal Pradesh.

Similarly large inter-state differentials can be observed in the sectoral rates of growth particularly so in the case of the registered manufacturing sector, despite the fact that it has been the main area of policy intervention.

Sectoral Pattern of Growth

In general the sectoral pattern of growth has been more

balanced in the rapidly growing states of Punjab, Haryana,
Gujarat, Jammu and Kashmir and Maharashtra, which have regi-
stered above average growth in all the sectors. The states
of Andhra Pradesh, Assam, Karnataka and Uttar Pradesh, which
fall in the medium category in terms of growth rate, also
exhibit a sectorally balanced pattern of growth. Among the
slow growing states Himachal Pradesh, Kerala and Tamil Nadu
show relative stagnation in all the three sectors. Orissa,
Rajasthan and West Bengal show above average growth rate in
the primary sector but below average growth in the seoondary
and the teritary sectors. On the other hand, in Bihar and
Madhya Pradesh the primary sector shows stagnation but the
secondary and teritary sectors show satisfactory progress.
The close association of the growth rate of SDP and sectoral
growth rates.

Growth of Per Capita SDP

In terms of per capita SDP the states which registered
most rapid rate of increase are Punjab, Maharashtra, Haryana,
and Gujarat, which are also the richest states. On the other
hand the growth rate of per capita SDP was nominal in the
case of Kerala, Assam and Rajasthan. Himachal Pradesh is the
only state which shows a decline in per capita SDP over the
period. On the whole it appears that the poorer states have
shown below average growth rate in per capita SDP, implying

a widening in the income disparities. The coefficient of
correlation between the level of per capita SDP and rate of
growth of per capita SDP is +0.6928. Similar inverse rela-
tionship was also observed by the author for the earlier
period (4).

Trends in Inter-State Disparities

Table 2 shows the trends in the selected indicators of
regional disparities, e.g., coefficient of variation, range
and minimum — maximum ratio. Inspite of the various policy
measures we find that the extent of inter-state disparity
has sharply increased over the years. The sixties had also
witnessed a process of divergence (4). The process of
divergence seems to have been arrested since the beginning
of the eighties. This period is also marked by a tilt in
resource transfer in favour of the poor states (3). One
would, therefore, watch with interest the trends in regional
disparities in coming years to find out whether the recent
shift is a lasting phenomenon or not.

Factors in Regional Disparities

The regional imbalances in the Indian economy and the
uneven spatial pattern of growth are the result of deeprooted
historical, demographic and structural factors which cannot
be fully explored here. However, we have tried to see their
association with some of these variables. We have correlated

the levels of per capita SDP and growth rate of total SDP
separately with three sets of factors, namely, land resource
base, economic structure and infrastructural development.
Statewise data have been given in Tables 3,4 and 5 respectively.
The values of coefficient of correlation and coefficient of
variation have also been given in the end of the tables.

Some interesting results emerge from our analysis.
Poverty is found related positively to the size and popula-
tion of the states. The coefficient of correlation of per
capita SDP with population density is not significant. Sig-
nificantly resource base in terms of net cultivated area per
agricultural worker and average size of operational holdings
turns out to be an important variable. The present demogra-
phic disbalance of these states is the result of a long
historical process of concentration of population in the
once land rich and fertile regions around the major river
systems of the country particularly the Ganga basin (4).
The structural variables also turn out to be significant as
per capita SDP is negatively correlated with the share of
agriculture in total workers and total SDP. On the other
hand, urbanization and growth of the secondary and teritary
sectors exercise a positive influence on per capita SDP.
Similarly, the development of socio-economic infrastructure
is found to be strongly associated with per capita SDP.

Analysing the determinants of the growth rate of SDP, we find that land base has been an important variable, but the coefficient for area and population size, though positive are not statistically significant. Variables related to economic structure have not been found significant, though urbanization is positively associated with growth rates. Growth rates are found to be positively correlated with economic infrastructure particularly with power consumption and road transport. But the relationship is surprisingly weak in case of facilities of institutional credit as also with social infrastructure.

We may now look at the role of another major determinant of rate of growth, i.e., saving and investment rate. Mathur found that the correlation of savings generated with regional economic growth (0.27), although positive was not significant (2, p.193), Inclusion of fiscal transfers did not improve the explanatory power of the savings variable, but the flow of institutional finance was found highly correlated with regional growth $(r = 0.74)$ and its inclusion in savings raised the correlation to 0.44.

Prasad (3) has also recently looked into the relationship between per capita SDP rates of growth, state plan outlays and flow of resources to the states. Some of the data analysed by him has been reproduced in Table 6. Using multiple regression analysis he found that while state plan

outlay had positive impact on growth rate during the period
1969-70 to 1984-85, the impact of central and centrally
sponsored projects was negative and that of investment in
central government non-departmental undertakings though
positive was insignificant. Prasad also found that while the
resource transfer through Finance Commission, Planning
Commission as well as through Central Government investment
has favoured the poorer states on the whole, it has been
inadequate to arrest the trend in regional inequalities.
Financial disbursement through public sector financial
institutions, on the other hand, was found to be regressive.

Policy Conclusions

The above discussion has revealed that though the
forces of growth are fairly widespread the process of growth
has been spatially uneven resulting in accentuation of
regional disparities. The policy instruments devised to
promote a more balanced pattern of regional development are
not strong enough to arrest the divergent trend in inter-
state disparities. Efforts on a more systematic and larger
scale than in the past are needed to attain the objective
of balanced regional development. A few suggestions in this
respect are offered below.

Firstly, policy objectives in terms of the balanced
regional development have to be more clearly specified and
monitored carefully. Since the concept of backwardness is

itself vague, it should be properly spelled out. Multi-
dimensional nature of the problem has to be clearly grasped.

Secondly, it should be realized that there would
always be some differences in the potential as well as the
level of development in different regions. What can be
assured through state policy is that differences in infras-
tructure and social consumption in different parts of the
country are not very large as at present. Minimum Needs
Programme has, therefore, to be enlarged and strengthened to
provide a minimum level of social facilities in all parts
of the country.

Thirdly, the focus should be on accelerating the growth
rate in the slow growing regions. Any global policy for the
development of the backward states as a whole is not likely
to be very successful. Such a policy should be region
specific and must take into account the economic, demo-
graphic, administrative and institutional constraints
affecting the growth performance of each region or state.
Our analysis has highlighted two important areas from the
point of view of promoting growth in the backward areas : one
is the need to speed up the process of structural change to
reduce the demographic pressure on land; and, second is the
need for strengthening the economic and financial
infrastructure.

Fourthly, the rate of investment has to be encouraged in the backward states both through mobilizing more internal resources as well as ensuring a much larger flow of resource from outside through different mechanisms. The working of the financial institutions has to be effectively oriented in favour of the poorer states.

Fifthly, in the absence of regional linkages the location of large public sector projects in backward pockets has failed to dynamise the local economy. Hence, these projects should be d.vetailed with the regional development plans by consciously developing regional linkages.

Finally, the tendency to spread the resources too widely and thinly should be resisted. The approach of concentrating investment on selected growth points and gradual deconcentration would be economically more rewarding.

Table 1 : Statewise Exponential Growth Rates of Total Sectoral and Per Capita State Domestic Product at Constant Prices - 1970-71 to 1983-84.

(Per Cent Per Annum)

States	Per Capita SDP*	Primary sector	Second-ary sector	Manufa-cturing sector (Regd)	Terti-ary sector SDP	Total	Per Capita SDP
1. Punjab	1443	4.00	5.98	8.68	6.84	5.16	2.91
2. Haryana	1089	3.03	6.23	7.49	8.08	4.92	2.32
3. Gujarat	937	3.26	5.84	6.92	5.90	4.74	2.24
4. Maharashtra	891	4.27	5.02	6.03	4.73	4.68	2.34
5. West Bengal	757	2.45	2.07	1.49	4.06	2.90	0.80
6. Karnataka	700	2.06	5.63	7.74	5.12	3.75	1.25
7. Andhra Pradesh	693	2.18	5.47	6.07	5.89	3.89	1.73
8. Himachal Pradesh	687	1.47	2.62	3.51	2.96	1.90	−0.01
9. Jammu & Kashmir	637	2.86	7.03	16.88	5.36	4.58	1.93
10. Tamil Nadu	628	−0.70	4.15	5.25	4.99	2.85	1.23
11. Kerala	627	−0.20	3.28	3.71	4.30	2.17	0.40
12. Rajasthan	570	2.37	3.15	4.93	4.73	3.18	0.29
13. Assam	554	2.33	4.36	3.19	6.91	3.57	0.38
14. Orissa	533	3.18	2.10	0.18	3.89	3.30	1.42
15. Madhya Pradesh	531	1.56	5.31	7.28	5.98	3.41	1.18
16. Uttar Pradesh	529	2.78	6.77	5.66	4.33	3.90	1.56
17. Bihar	427	1.12	5.61	5.61	6.67	3.42	1.07
India	713	2.14	4.30	4.67	5.89	3.89	1.61
Coefficient of variation (Per cent)		56.82	32.57	59.20	23.80	24.76	58.96
Maximum − Minimum Ratio			3.40	11.33	2.73	2.27	

Coefficient of Correlation:

(a) with per capita SDP +0.5252 0.2680 +0.2486 +0.3895 +0.6233 +0.6526

(b) with rate of growth of SDP +0.7496 +0.7485 +0.5816 +0.6496 +1.0000 +0.9040

*Average of 1981-84 at 1970-71 prices.

Table 2 : Trends in Inter-State Disparities in Per Capita
SDP : 1970-85.

Year	Coefficient of Variation(%)		Standard Range		Maximum/ Minimum Ratio
	Unweighted	Weighted	Deviation(Rs.)		
1970-71	25.75	24.12	153	668	2.66
1971-72	27.19	25.62	161	678	2.67
1972-73	27.10	23.98	145	702	2.77
1973-74	26.91	25.97	161	726	2.90
1974-75	28.50	27.38	169	728	2.86
1975-76	28.11	26.99	179	783	2.91
1976-77	31.79	29.55	193	825	2.97
1977-78	31.15	28.67	199	889	3.06
1978-79	32.14	29.97	215	956	3.21
1979-80	36.42	34.57	230	976	3.48
1980-81	33.44	29.97	209	953	3.24
1981-82	34.00	30.53	220	1022	3.37
1982-83	35.22	30.04	217	1054	3.37
1983-84	32.35	28.45	217	1015	3.22
1984-85	34.47	29.29	227	1053	3.17

Notes : 1. Coefficient of variation and other indicators of
disparities have been computed from the series of
per capita state domestic product at constant
1970-71 prices given in CSO (1).

2. Shares of states' in the national population
have been used as weights.

3. Weighted C.V. and standard deviations have been
computed around national per capita SDP.

Table 3 : Statewise Sectoral Composition of Working Force
and SDP.

States	Per Capita SDP*	% of Workers in Agriculture Sector	% Share in SDP at Current Prices 1983-84		
			Primary Sector	Secondary Sector	Tertiary Sector
1. Punjab	1443	58.0	43.3	22.0	34.7
2. Haryana	1089	60.8	46.3	23.0	30.7
3. Gujarat	937	60.1	35.0	27.2	37.8
4. Maharashtra	891	61.7	28.6	32.5	38.9
5. West Bengal	757	55.0	40.2	23.1	36.7
6. Karnataka	700	65.0	42.8	27.9	29.1
7. Andhra Pradesh	693	69.5	45.7	16.2	38.1
8. Himachal Pradesh	687	70.8	46.4	19.4	34.2
9. Jammu & Kashmir	637	60.3	52.5	16.9	30.6
10. Tamil Nadu	628	61.0	22.2	29.3	48.5
11. Kerala	627	41.3	40.5	30.3	39.2
12. Rajasthan	570	68.9	54.7	16.0	29.3
13. Assam	554	63.3	62.22	12.04	25.74
14. Orissa	533	74.7	66.3	10.0	23.7
15. Madhya Pradesh	531	76.2	54.0	20.8	25.2
16. Uttar Pradesh	529	74.5	43.0	20.7	36.3
17. Bihar	427	79.1	48.6	20.6	30.8
India	713	66.5	39.7	22.3	38.0
Coefficient of Variation %		13.92	23.51	28.46	18.20
Maximum/Minimum Ratio		1.92	2.98	3.25	2.05
Coefficient of Correlation:					
(a) with per capita SDP		-0.4332	-0.3327	+0.3187	+0.2243
(b) with rate of growth of SDP		-0.0063	-0.0771	+0.0631	-0.0876

*Average of 1981-84 at 1970-71 prices.

Table 4 : Statewise Indicators of Population and Land
Resource Base

States	Per Capita SDP*	Geographical Area (Sq.Km) ('000)	Population in lakhs 1981	Population Density (Person/Sq.Km) 1981	% Urban population 1981	Net Cultivated Area per person, 1983-84	Cultivated Area per Agr. worker 1983-84	Average size of operational Holdings in Hect. 1980-81
Punjab	1443	50	168	333	27.7	0.24	1.47	3.79
Haryana	1089	44	129	292	21.9	0.26	1.62	3.52
Gujarat	937	196	341	173	31.1	0.27	1.45	3.45
Maharashtra	891	308	628	204	35.0	0.28	1.22	2.95
West Bengal	757	89	546	615	26.5	0.09	0.63	0.94
Karnataka	700	192	371	194	28.9	0.27	1.19	2.73
Andhra Pradesh	693	275	536	195	23.3	0.20	0.73	1.87
Himachal Pradesh	687	56	43	76	7.0	0.13	0.57	1.54
Jammu & Kashmir	637	222	60	27	21.1	0.12	0.65	0.99
Tamil Nadu	628	130	484	372	33.0	0.12	0.50	1.07
Kerala	627	39	255	655	18.7	0.08	0.78	0.43
Rajasthan	570	342	343	100	21.0	0.44	2.26	4.44
Assam	554	78	199	254	10.3	0.13	0.69	1.36
Orissa	533	156	264	169	11.8	0.22	0.93	1.59
Madhya Pradesh	531	443	522	118	20.3	0.35	1.26	3.42
Uttar Pradesh	529	294	1109	377	17.9	0.15	0.72	1.01
Bihar	427	174	690	402	12.5	0.10	0.46	0.99
India	713	2986	6852	216	23.3	0.20	0.96	1.82
Coefficient of Variation %		63.80	66.33	63.69	36.50	48.30	47.12	60.42
Max/Min Ratio		11.36	25.79	8.61	5.00	5.50	4.91	10.33

Coefficient of Correlation :

(a) with per capita SDP -0.3740   +0.0505   +0.2080   +0.5273
                                  -0.3425   +0.4905   +0.4286

(b) with rate of growth of SDP +0.1585   -0.2741   +0.3525   +0.5129
                                  +0.0064   +0.4713   +0.4150

*Average of 1981-84 at 1970-71 prices.

Table 5 : State-wise Indicators of Socio-Economic Infrastructure

States	Per Capita SDF*	Consumption of Electricity per capita KWH. 1984-85	Surface Road per ca 100 Sq. Km. 1981-82	Regd. Vehicle per lakh 1982-83	No.of Pri-mary & Jr. Basic School per lakh of po-pulation 1983-84	No.of Allo-pathic Hosp-itals per lakh 1982-83	Beds Ava-ilable in hospital per lakh 1983	Popula-tion per Bank Branch (000)1985	Credit Deposit Ratio 1985	Cooper-ative Credit per ha. of NSA (Rs.) 1983-84
Punjab	1443	354	65	2615	70	11	119	8.5	44.6	1083
Haryana	1039	229	42	1211	35	3	58	11.9	67.6	993
Gujarat	937	282	6	1510	32	4	111	11.3	54.7	389
Maharashtra	891	292	9	1728	56	7	128	13.1	90.8	52
West Bengal	757	129	17	768	78	1	87	17.2	51.9	411
Karnataka	700	190	27	1359	59	5	86	9.7	86.7	378
Andhra Pradesh	693	167	13	735	74	2	64	13.2	78.3	453
Himachal Pradesh	687	111	8	879	147	7	89	8.1	44.0	477
Tamil Nadu	628	228	28	844	56	2	81	12.4	98.6	1022
Kerala	527	129	41	875	26	6	169	9.4	68.6	500
Rajasthan	570	131	10	774	64	4	54	13.2	70.5	216
Assam	554	46	7	554	119	3	55	23.3	53.3	53
Orissa	533	126	8	296	131	2	43	15.7	92.8	363
Madhya Pradesh	531	157	12	1728	56	2	31	14.4	62.6	208
Uttar Pradesh	529	109	17	539	62	2	44	15.5	49.2	374
Bihar	427	87	10	311	69	2	38	17.7	41.7	217
India	713	167	15	981	70	3	74	13.3	69.6	445
Coefficient of Variation (%)		46.81	80.70	58.10	46.05	65.66	46.89	28.35	27.63	60.99
Max/Min.Ratio		7.70	9.29	8.41	5.65	11.00	5.45	2.74	2.36	20.43
Coefficient of Correlation : a) with per capita SDF		0.8388	0.6866	0.9088	-0.3305	0.6694	0.4784	-0.5027	-0.1301	0.7209
b) with rate of growth of SDF		0.6832	0.2882	0.6214	-0.3949	0.2353	-0.0074	-0.0249	-0.0044	0.3261

*Average of 1981-84 at 1970-71 prices.

Table 6 : Plan Outlays and Resource Transfers to States As
Per Cent of SDP at Current Prices.

States	Per Capita SDP*	State Plan Outlay	Devolution by finance commission	Central Plan Assistance	Expenditure on Central & Centrally sponsored projects	Investment in Central Non-Departmental undertakings
Punjab	1443	6.21	1.68	1.04	0.99	0.92
Haryana	1089	8.30	2.03	1.33	1.22	1.05
Gujarat	937	7.20	2.72	1.34	1.18	1.82
Maharashtra	891	5.91	2.44	1.00	0.88	3.66
West Bengal	757	4.62	3.39	1.16	0.86	2.22
Karnataka	700	5.86	3.41	1.64	1.17	2.98
Andhra Pradesh	693	5.72	3.97	1.93	1.56	3.38
Tamil Nadu	628	6.15	3.81	1.56	1.23	2.25
Kerala	627	6.18	4.44	2.17	1.05	1.41
Rajasthan	570	5.94	4.38	2.30	1.85	1.13
Assam	554	6.05	5.55	4.64	1.49	6.58
Orissa	533	6.93	6.75	3.34	2.49	4.88
Madhya Pradesh	531	7.94	4.58	2.38	1.82	5.45
Uttar Pradesh	529	6.92	4.87	2.43	1.51	1.32
Bihar	427	6.01	5.87	2.80	1.62	5.48
Coefficient of Variation %		13.97	34.82	46.02	30.28	40.86
Max/Min. Ratio		1.80	4.02	4.64	2.90	3.67

Coefficient of Correlation :

(a) With per capita SDP

		0.1194	-0.8619	-0.6466	-0.5642	-0.5343

(b) With rate of Growth of SDP

		-0.3477	-0.1654	0.0466	-0.5530	-0.1042

*Average 1981-84 at 1970-71 prices.

REFERENCES

1. Central Statistical Organization, Government of India, Estimates of State Domestic Product, 1970-71 to 1985-86, New Delhi, 1987

2. Ashok Mathur, 'Why Growth Rates Differ Within India: An Alternative Approach', The Journal of Development Studies, Vol.23, No.2, January 1987.

3. Pradhan H. Prasad, 'Roots of Uneven Regional Growth in India', Economic and Political Weekly, Vol.33, No.33, August 13, 1988.

4. Ajit Kumar Singh, 'Trends in Regional Disparities', Productivity, Vol.25, No.2, 1984.